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SUBJECT: (U) Soviet IL-28/BEAGLE

TO: Secretary of Defense
Deputy Secretary of Defense
Chairman, Joint Chiefs of Staff
Director, Joint Staff

1. The attached summarizes the potential military uses of the IL-28/BEAGLE as deployed in Cuba.
2. The IL-28/BEAGLE is a versatile jet light bomber in use since 1950. It was designed as a high altitude (30,000-35,000 feet) bomber, but has also demonstrated a ground support capability. Additionally, it could be used in the reconnaissance, anti-shipping, mine-laying and utility roles.

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1. Capabilities of a Cuba-Based IL-28/BEAGLE Force
 2. Performance and Characteristics
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CAPABILITIES OF A CUBA-BASED IL-28/BEAGLE FORCE

A. GENERAL

1. The IL-28 is primarily a light bomber, and following its appearance in 1950, was assigned in large numbers to bomber regiments in Soviet Tactical Air Armies in support of Soviet ground forces. Although the numbers of these aircraft have been reduced (mostly since 1960) with the introduction of higher performance aircraft into Tactical Aviation, the IL-28 apparently still constitutes the backbone of the Tactical Aviation bombing capability. Although basically designed as a high-altitude jet bomber, it has a demonstrated ground support capability. Its SHOREWALK navigation system will provide precise navigation to targets up to 185 n.m. while the MUSHROOM bombing/navigation radar is used for longer distances. With a diving turn radius at sea level under combat load conditions of about 500 yards at 260 knots, the IL-28 has good maneuverability. Its forward firing 23 n.m. guns contribute to its ground support capability. As a high altitude bomber, the IL-28 is believed to be used at altitudes as high as 30,000-35,000 feet. Nuclear storage sites have been identified in the USSR adjacent to IL-28 bomber bases, supporting estimates that this aircraft has a nuclear bombing capability.

2. Soviet Tactical air armies continue to have reconnaissance regiments equipped with IL-28 which is equipped for high and low level photography day or night.

3. The IL-28 has also been widely used by Communist naval air forces as a mine layer and a torpedo carrier. Significantly it proved to be more versatile in these roles than the TU-14/BOGUE, which also appeared in 1950 for naval air use but was later replaced in naval air regiments by the IL-28.

The TU-16/BADGER jet medium bomber has since replaced the IL-28 in Soviet naval aviation, but the latter is still used for naval air missions in other Communist countries.

4. The IL-28 is also employed in a variety of utility roles. Widely used to tow targets for gunnery practice (aerial, AAA, ship-to-air), it has frequently been noted flying low-altitude penetration missions against Soviet air defenses to exercise the air warning and interceptor systems. It has been used to calibrate the air defense radars and generally to assist in the training of Soviet air defense forces. It has been widely used in ECM activity to train these forces.

B. PROBABLE ROLES AND MISSIONS OF THE IL-28

5. Operations in support of Cuban forces:

- a. Overland and offshore photographic and visual reconnaissance.
- b. Anti-shipping attack, using bombs, depth charges, torpedoes and automatic weapons.
- c. Support missions (bombing and strafing) against invading forces or guerrilla forces operating in the interior of Cuba.
- d. Electronic countermeasures.
- e. Training of Cuban air defense forces.
- f. Miscellaneous utility/liaison functions.

6. Operations against the United States and Latin American nations. (See Attachment 2 for characteristics and performance data, and Attachment 3 for areas of coverage):

- a. Photographic and electronic reconnaissance of the Caribbean Sea and Gulf of Mexico, as well as adjacent land areas of the United States and

Latin America.

- b. Covert mine laying in United States and/or Latin American waters.
- c. High altitude (30,000-35,000 feet) bombing attacks.
- d. Support of Cuban forces attempting amphibious operations against adjacent coastal areas.

C. EFFECTIVENESS OF THE IL-28/BLADE

1. Although, as indicated above, the IL-28 possesses a high degree of adaptability to various types of combat employment, it probably could not be used to the full extent of its potential due to existing, recognized, limiting factors.

2. Among these are:

a. Age. Series production of the IL-28 stopped at least five years ago, probably earlier. The problem of field maintenance, and availability of spare parts and sub-assemblies, probably constitutes an increasingly troublesome problem. It is currently estimated that the IL-28 will probably be phased out of operational units of the Soviet Air Force by 1964.

b. Performance. As indicated in Attachment 1, the average cruise speed of the IL-28, as well as its target speed, is around 380 knots. Its maximum speed is estimated at about 465 knots. This aspect of performance alone makes it extremely vulnerable to modern air defense systems.

D. COMPARISON OF IL-28 WITH THE MIG FIGHTERS NOW IN CUBA

1. MIG-15/17/19/21 aircraft now in Cuba in addition to their fighter defense capability also have the capability to attack targets on land or sea using guns, rockets and bombs. These can be carried out at higher speeds

than that of the IL-28. The latter, however, has a far greater range and payload capability. The IL-28 is also superior to these aircraft in the areas of reconnaissance, torpedo and mine carriers, and utility/liaison.

PERFORMANCE AND CHARACTERISTICS

1. The IL-28 with a 6600 pound bomb load (conventional or nuclear) flown under optimum conditions is estimated to have the following performance without the use of wing-tip external fuel tanks:

Take-off ground run at Sea Level (ft)	3,300
Take-off to clear 50 feet (ft)	4,900
Time to climb-SL to 30,000 feet (min)	13.0
Combat Range (nm)	1,100
Combat Radius	390
Average Cruise Speed (kts)	380
Target Speed (kts)	395
Maximum Speed (at 15,000 feet) (kts)	465
Target Altitude (ft)	38,800
Final Cruising Altitude (ft)	44,200
Total Mission Time (hrs)	3.5

2. If the IL-28 is flown on a low-low-high mission (proceed to target and attack at low altitude, climb to best operating altitude and return to base), it is estimated that it would have a combat radius of 350 nm with a 4430-pound bomb load. Estimated maximum speed at sea level is 395 kts.

3. The IL-28 has also been observed with wing-tip fuel tanks, but present evidence implies that only the photographic reconnaissance version of this aircraft carries these tanks. With tip tanks, however, and with a reduced but still effective bomb load the aircraft as a bomber is estimated to have a combat range of 1,400 nm and a combat radius of 740 nm under the above optimum conditions. There is no evidence that the IL-28's in Cuba have tip-tanks, nor are tip-tanks normal for IL-28 bomber type aircraft.

4. The bomber version is equipped with two 23mm fixed forward firing guns in the fuselage and two 23mm guns in the tail turret. Two hundred rounds of ammunition are carried for the nose guns and 450 rounds for the tail guns. The bomb bay is 14 feet long, 3.2 feet high at the side wall and 3.4 feet at the center.

5. The reconnaissance version of IL-28 is similar in dimensions and external appearance to the bomber except for the elimination of the right nose gun port and the tip tank installation. Internally, the right nose gun is eliminated along with a wing (internal) fuel tank. Added is photographic equipment and a bomb bay fuel tank.

